

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

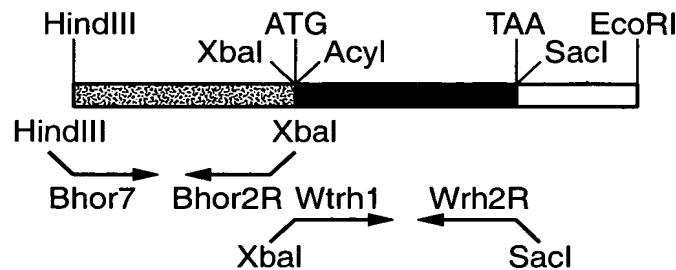
IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

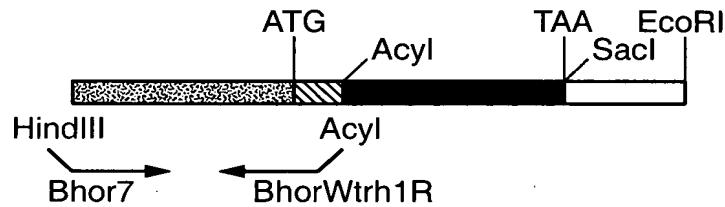


THIOREDOXIN *h* CONSTRUCTS FOR TRANSFORMATION

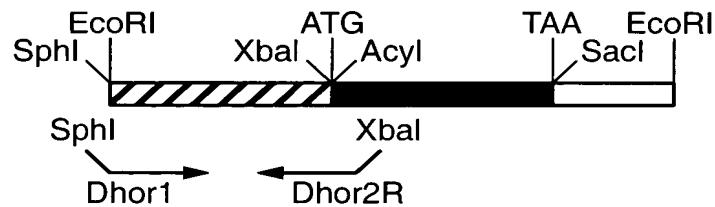
pdBhWTRXhN-1



pdBhssWTRXhN3-8



pDhWTRXhN-2



pGlbWTRXhN-1



B1 - hordein promoter



Maize globulin promoter



Wheat thioredoxin *h*



D - hordein promoter



B1 - hordein signal sequence



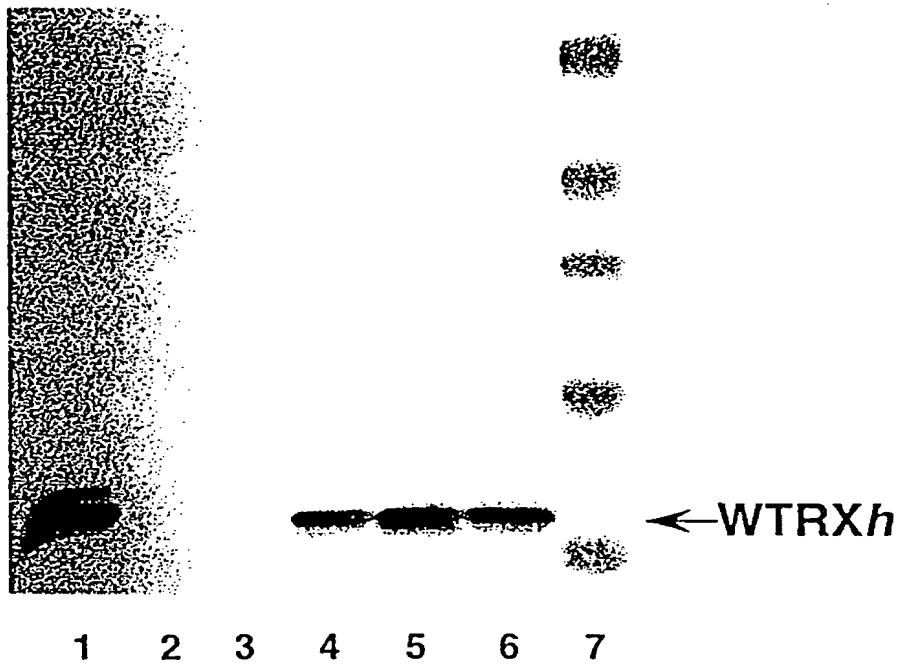
3' nos terminator

FIGURE 1



Western Blot Analysis of Barley Grain Transformed with Wheat Thioredoxin

SDS-PAGE: cv. Golden Promise



1. Wheat germ thioredoxin
2. Control (GP 4-96), nontransformed
3. Control, null segregant (GPdBssBarWtrx-29-11-10)
4. Transformed, heterozygous line (GPdBssBarWtrx-29)
5. Transformed, homozygous line 1 (GPdBssBarWtrx-29-3)
6. Transformed, homozygous line 2 (GPdBssBarWtrx-29-3-2)
7. Prestained standards

FIGURE 5



AAGCTTTAACAAACCCACACATTGATTGCAACTTAGTCCTACACAAGTTTCCATT
CTTGTTCAGGCTAACAAACCTATAAGGTCCAAAATCATGCAAAGTGAATGC
TAGGITGATAATGTGTGACATGTAAAGTGAATAAGGGAGTCATGCATACCAAA
CCTCGGGATTCTATACTTTGTGATGATCATATGCACAACTAAAGGCAACTTT
GATTATCAATTGAAAAGTACCGCTTGTAGCTTGTGCAACCTAACACAATGTCCA
AAAATCCATTGCAAAGCATCCAAACACAATTGTTAAAGCTGTCAAACAAAC
AAAGAAGAGATGAAGCCTGGCTACTATAAATAGGCAGGTAGTATAGAGATCTA
CACAGCACAAGCATAAAACCAAGAAACACTAGTTAACACCAATCCACTATGA
AGACCTTCTCATCTTGCACTCTGCCATTGCGGCAACAAGTACGATTGCA

FIGURE 6

CTTCGAGTCCCCGCCATTGCCAGCAATGGCTAACAGACACATATTCTGCC
AAAACCCCAGAACATAATCACTCTCGTAGATGAAGAGAACAGACCAAGAT
ACAAACGTCCACGCTTCAGCAAACAGTACCCAGAACTAGGATTAAGCCGAT
TACGCGGCTTGTAGCAGACCGTCCAAAAAACTGTTTGCAAAAGCTCCAATTCC
TCCTTGCTTATCCAATTCTTGTGGCAAACACTGCACTTGTCCAACCGATT
TTGTTCTTCCCGTGTCTTCTTAGGCTAACTAACACAGCCGTGCACATAGCC
ATGGTCCCGGAATCTCACCTCGTCCCTATAAAAGCCCAGCCAATCTCCACAAT
CTCATCATCACCGAGAACACCGAGAACACCACAAAACTAGAGATCAATTGATG
ACAGTCCACCGAGATGGCTAACGGCTGGTCTCTTGTGGCGGTAAATGTC
GCCCTCGTGGCTCTCACCAACCGCT

FIGURE 7

**Effect of NTR on the Reduction of Proteins in Extracts of Wheat:
Transgenic line Over-expressing Thioredoxin h vs. Null Segregant**

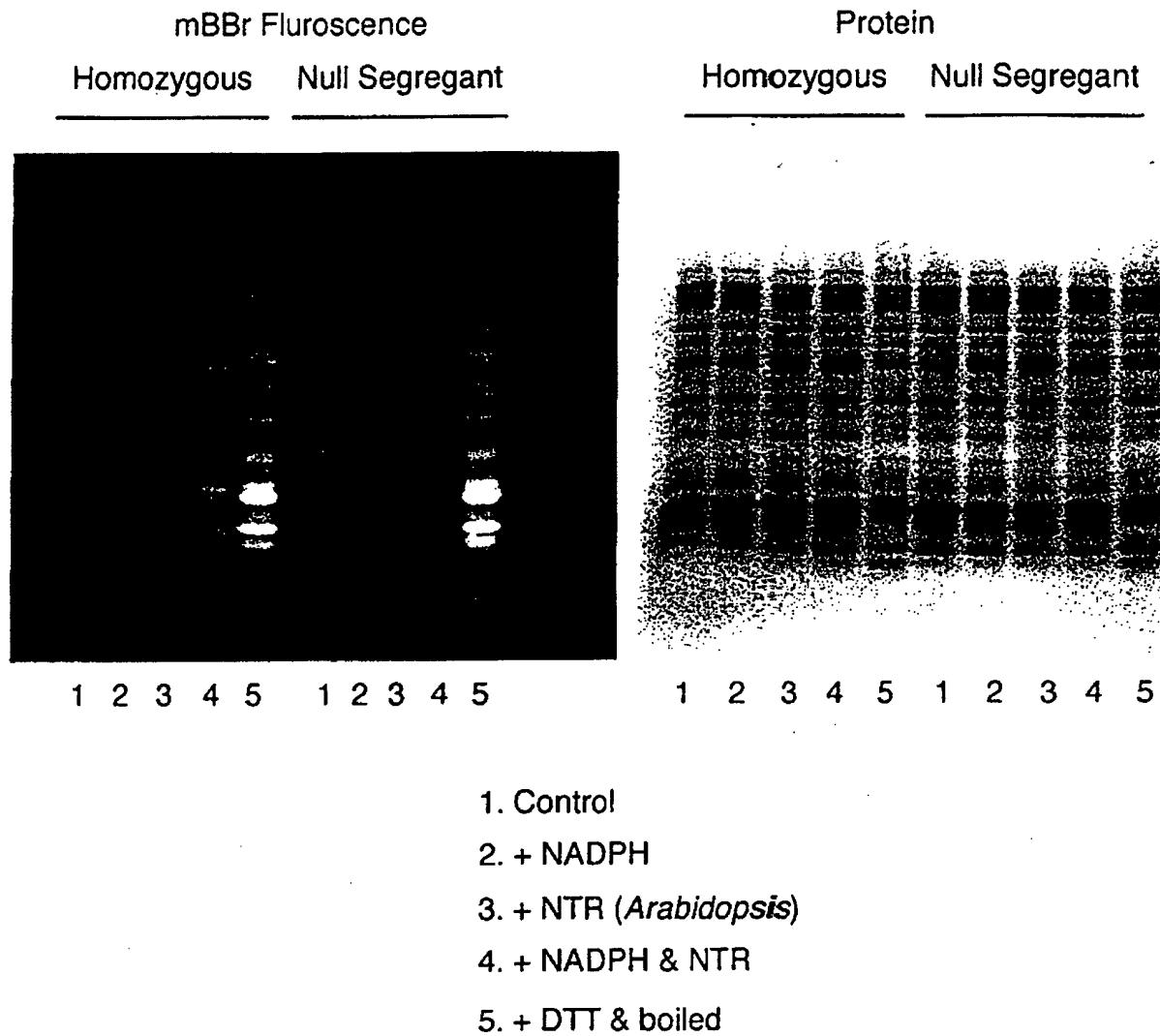


FIGURE 18

02570 USPTO
02090

FIGURE 8A

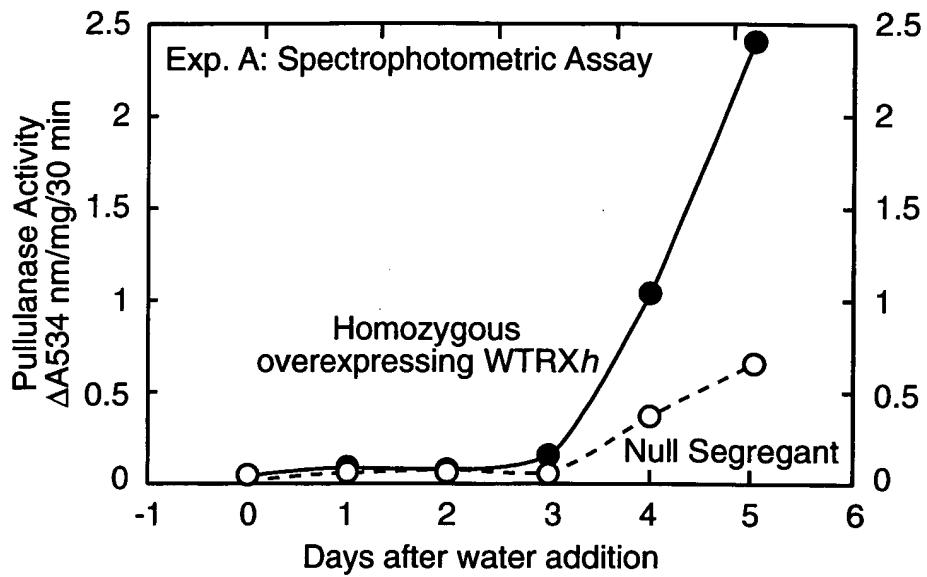


FIGURE 8B

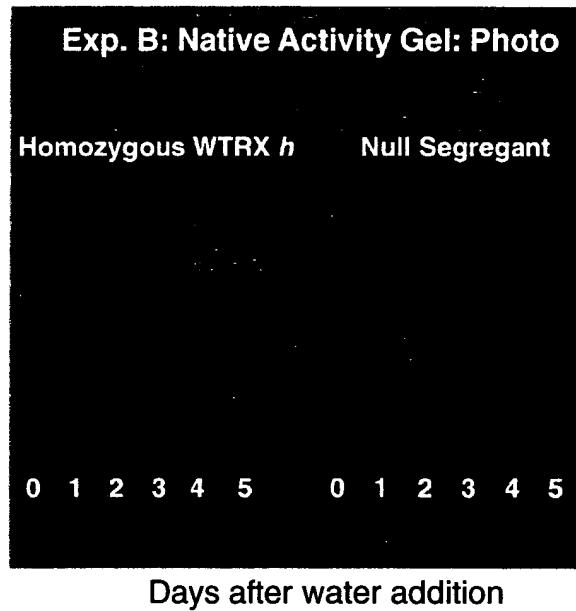
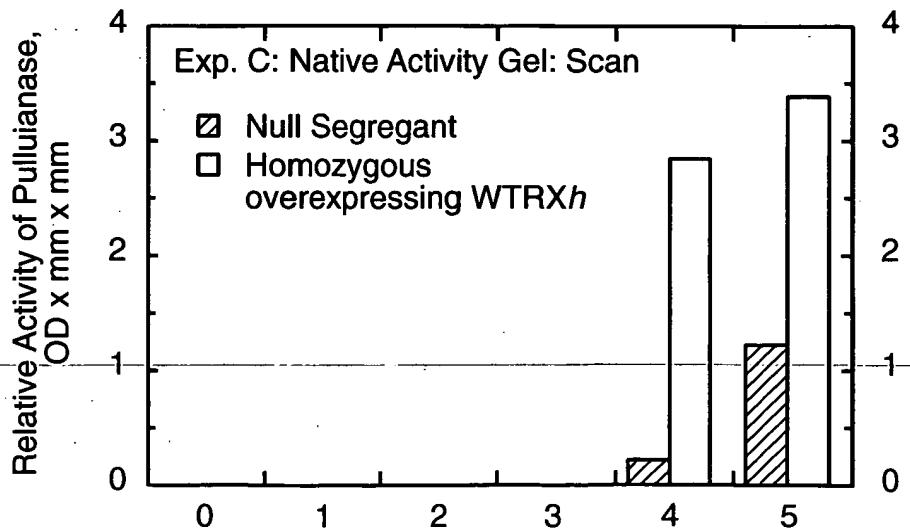


FIGURE 8C





**Effect of Overexpressed Thioredoxin *h* on
Allergenicity of Proteins from Wheat Grain**

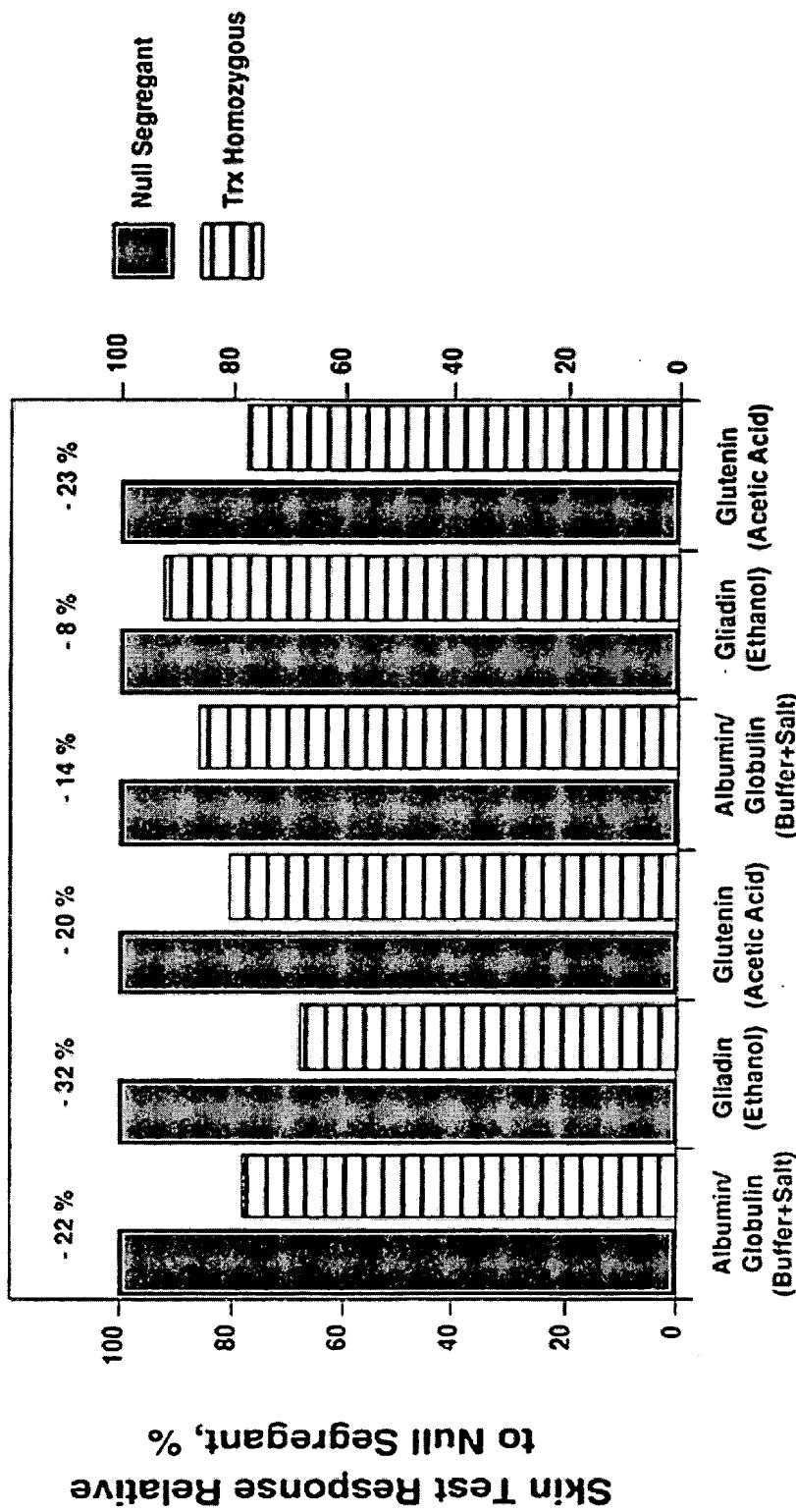


FIGURE 19

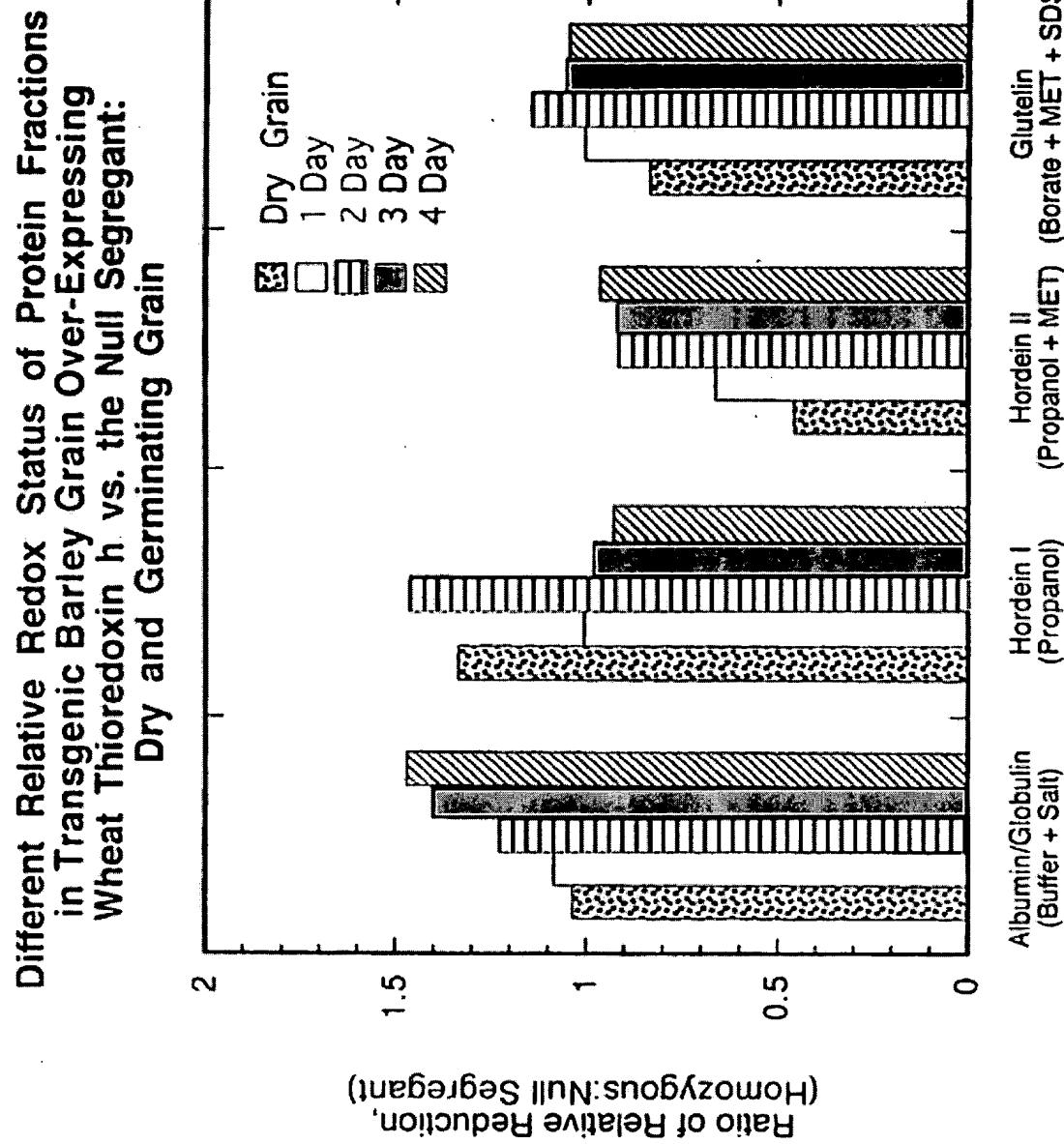


FIGURE 22

Old S. U. 0/2500
4674 06090

Effect of Glucose-6-phosphate Dehydrogenase on the Reduction of Proteins in Extracts of Transgenic Wheat Grain Overexpressing Thioredoxin *h* in the Presence of Glucose 6-phosphate and Arabidopsis NTR: +/- NTR

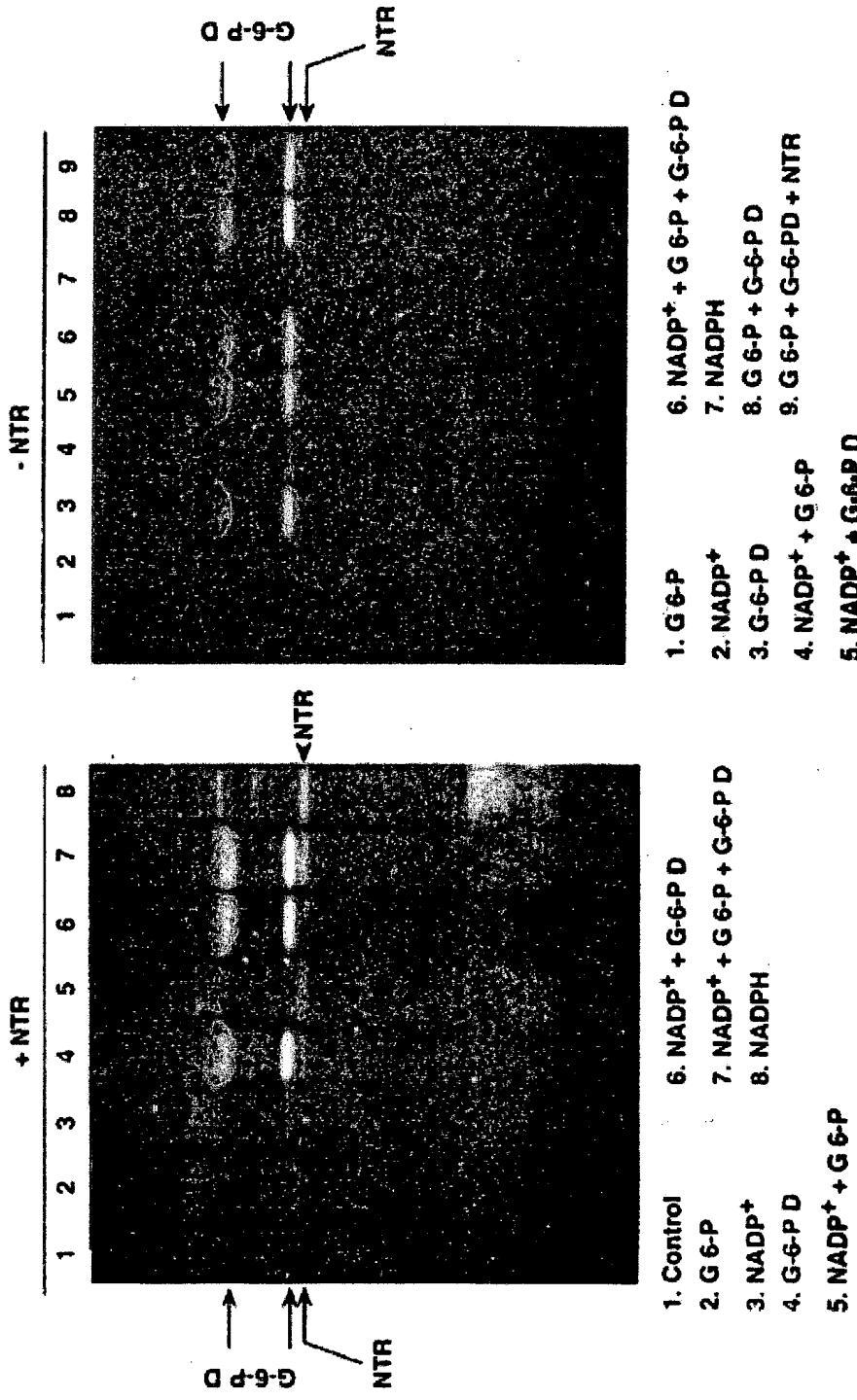


FIGURE 23